

DETECH - DOCUMENT

WHAT IS CLAIMED IS:

1. A cable modem tuner comprising an upstream circuit for transmitting a data signal to a CATV (cable television) station, wherein said upstream circuit includes
5 a gain controllable gain control circuit receiving said data signal, a power amplifying circuit power-amplifying the data signal having gain controlled by said gain control circuit, and a control circuit for controlling transmission/interruption of said data signal.
2. A cable modem tuner comprising a receiving unit for receiving a down signal from a CATV (cable television) station, wherein said receiving unit includes
5 an up converter for converting said down signal to a first intermediate frequency signal of lower frequency, a filter for selecting the first intermediate frequency signal output from said up converter, and
10 a down converter converting the first intermediate frequency signal selected by said filter to a second intermediate frequency signal of lower frequency for output.
3. The cable modem tuner according to claim 2, wherein said up converter includes
5 a broadband high frequency amplifying circuit having a reception frequency band, for amplifying said down signal,
a gain variable broadband variable gain amplifying circuit receiving the down signal from said broad band high frequency amplifying circuit,
10 a local oscillation circuit outputting a local oscillation signal having higher frequency than said down signal, and
a mixer circuit mixing the down signal output from said broadband variable gain amplifying circuit with the local oscillation signal output from said local oscillation circuit.

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4. The cable modem tuner according to claim 2, wherein
said down converter includes a first intermediate frequency
amplifying circuit amplifying the first intermediate frequency signal
selected by said filter,
 - 5 a local oscillation circuit outputting a local oscillation signal having
lower frequency than said first intermediate frequency signal,
a mixer circuit mixing the first intermediate frequency signal output
from said first intermediate frequency amplifying circuit with the local
oscillation signal output from said local oscillation circuit and outputting a
second intermediate frequency signal,
 - 10 a second intermediate frequency amplifying circuit amplifying the
second intermediate frequency signal output from said mixer circuit, and
a filter for selecting said second intermediate frequency signal
output from said second intermediate frequency amplifying circuit.
5. The cable modem tuner according to claim 4, further comprising
a gain variable intermediate frequency gain amplifying circuit
receiving the second intermediate frequency signal from said second
intermediate frequency amplifying circuit.
6. The cable modem tuner according to claim 2, wherein
said filter includes a bandpass filter formed of an oscillation circuit
including a strip line, a print coil or an air core coil.
7. A cable modem tuner including an upstream circuit for
transmitting a data signal to a CATV (Cable Television) station and a
receiving unit for receiving a down signal from said CATV station,
comprising:
 - 5 a duplexer for branching the data signal to said CATV station and
the down signal from said CATV station;
a return pass circuit outputting said data signal to said duplexer;
and
a receiving unit receiving the down signal branched by said

10 duplexer.

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